

Abstract

A method for encapsulating optoelectronic components. An optical semiconductor die is attached to a lead frame or a substrate. A solid window transparent to light and no larger than the die area, excluding wire bond pads, is cut, scored, or otherwise singulated from glass or plastic. A transparent adhesive is applied to the optically-sensitive portion of the die, then the window is placed on the optically-sensitive portion of the die by a pick-and-place machine, forming a transparent aperture. Wires connect die circuitry to electrical leads on the lead frame or substrate. The assembly is encapsulated in molding material, leaving the upper surface of the window and the electrical leads exposed.